TOCRIS
a bio-techne brand

Print Date: May 19th 2022

Certificate of Analysis

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Product Name: **2-Chloro-N^6-cyclopentyladenosine** **Catalog No.: 1705** **Batch No.: 10**

CAS Number: 37739-05-2

IUPAC Name: 2-Chloro-*N*-cyclopentyladenosine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{20}ClN_5O_4.¼H_2O$

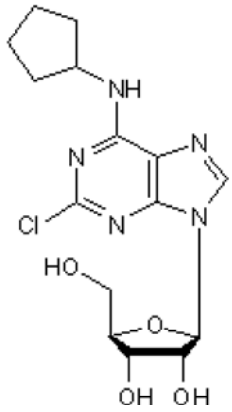
Batch Molecular Weight: 374.31

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.13	5.52	18.71
Found	47.8	5.53	18.5

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CAS Number: 37739-05-2

IUPAC Name: 2-Chloro-*N*-cyclopentyladenosine

Description:

2-Chloro-N^6-cyclopentyladenosine is a potent and selective adenosine A_1 receptor agonist (K_i values are 0.8, 2300 and 42 nM for human A_1, A_{2A} and A_3 receptors respectively; EC_{50} = 18800 nM for hA_{2B}). Centrally active following systemic administration in vivo.

Physical and Chemical Properties:

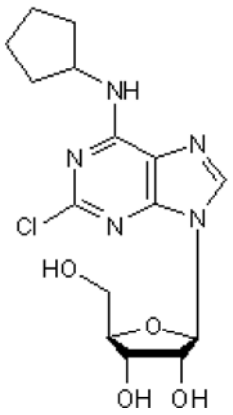
Batch Molecular Formula: $C_{15}H_{20}ClN_5O_4.¼H_2O$

Batch Molecular Weight: 374.31

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Klotz (2000) Adenosine receptors and their ligands. Naunyn Schmiedebergs Arch.Pharmacol. ***362*** 382. PMID: 11111832.

Monopoli *et al* (1994) Pharmacology of the highly selective A_1 adenosine receptor agonist 2-chloro-*N*^{6}-cyclopentyladenosine. Arzneimittelforschung ***44*** 1305. PMID: 7848348.

Concas *et al* (1993) Anticonvulsant doses of 2-chloro-*N*^{6}-cyclopentyladenosine, an adenosine A_1 receptor agonist, reduce GABAergic transmission in different areas of the mouse brain. J.Pharmacol.Exp.Ther. ***267*** 844. PMID: 8246158.

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